

University News

NOVEMBER 23, 1986

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From L to R: Shri K. C. Pant, Union Minister for Steel and Mines, Shri Jagmohan, Governor of Jammu & Kashmir and Prof. Shah Manzoor Alam, Vice-Chancellor at the twelfth annual convocation of the University of Kashmir.

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Editor :

SUTINDER SINGH

Association of Indian Universities 61st Annual Meeting

INAUGURAL ADDRESS

By

Shri R. K. Trivedi
Governor, Gujarat State

It was a sense of belonging which prompted me to accept Professor Shastri's invitation to be with you this afternoon. Less than a decade ago I had the privilege of working as one of you and I thought it would be worthwhile sharing my experiences with you both as a former Vice-Chancellor and now as the Chancellor of the Universities of Gujarat.

Ever since we gained independence, education has been subjected to the most rigorous scrutiny both by the educationists themselves and the Government. It was the system that was criticised initially in the context of the infamous minutes of Macaulay. Way back in the late '20s Mahatma Gandhi thought that the then prevailing system of education was not rooted in the culture and life of the people, that it had no relation to environment, that it failed to develop character, self-reliance and respect for manual labour and that all that it encouraged was mere text-book learning. Gandhiji therefore advocated an integrated system of education where basic education merged with higher education and the University education itself should aim at an allround development of the students with a view to turning out true servants of the people. It is important to recall that he placed special emphasis on adult education, women's education and Harijan education. Educationists found our university education irrelevant to the social and developmental needs of our society. Some found the system woefully inadequate in moral education. Some others advocated more practical and job-oriented education while ensuring due recognition to merit minus politics at all levels. As you are aware, after the circulation of the Status Paper on Education, an intensive and fruitful debate took place at the national level and a meaningful churning of various ideas on education ultimately produced the National Policy on Education, 1986, followed shortly thereafter by the Programme of Action in August 1986. The proof of the pudding will be in its eating and what we have got to see now is to ensure faithful implementation of the policies, programmes and strategies enshrined in the Education Policy. While different levels, viz., the pre-primary, primary, secondary, college and university education as also non-formal education are all very important, I would like to concentrate on higher education, first because that is your immediate concern and secondly because I feel that if, as stated in the policy document, education has to play an acculturating role "refining sensibilities and perceptions that contribute to national cohesion, a scientific temper and independence of mind and spirit—thus furthering the goals of socialism, secularism and democracy", then education generally and higher education in particular will have to be treated as a unique investment in the present and the future. When I talk of higher education it is not only higher education in general but specialised and professional education also to which I refer. Development of all crucial sectors, viz., agriculture, industry, social welfare including health and education itself, depends primarily on the nature and quality of education at the higher level and therefore not only the success of the education policy but the very process of development of the country is

dependent on the nature and quality of higher education including science and technology, medicine, engineering, etc. Universities therefore will have to play a key-role and move centre-stage future educational growth.

The Policy Statement visualises higher education to be more dynamic than ever before. For imparting the necessary dynamism some of the salient steps proposed are consolidation and expansion of institutions, development of autonomous colleges and departments, re-designing of courses, training of teachers and improvement in efficiency and accountability, strengthening of research and creation of bodies for coordination at the States and national level. Let us concede immediately that many of the 150 Universities and 5,000 Colleges do not have even a minimum level of infrastructure for maintenance of quality and standards. Quite obviously, all the deficiencies cannot be removed all at once, but the proposed State Councils on Higher Education and the University Grants Commission will have to play a cardinal role in planning and implementing phased programmes for improving facilities and wherewithal to achieve the objectives outlined in the policy within a reasonable period. The programme of autonomous colleges, fully funded for five years by the Central Government, seems to be a move in the right direction to enable the Universities to become real centres of excellence improving the overall quality of education and, above all, research in all the main areas, particularly those that have a bearing on applied research.

In a faithful implementation of all these programmes would lie the hope for the future. There are four specific hurdles which I foresee and which you ought to consider in some detail so as to suggest measures facilitating a faithful implementation of the policy.

The first hurdle, to my mind, relates to numbers. On the one hand, a democratic society that we are, we have to provide equal opportunities for everyone to have higher education. At the same time, we have to meet the growing demands of research, involving specialisation and theoretical and applied research in all areas relevant to the progress of the country. Many of the existing courses will have to be re-structured. The re-designing of courses in science and technology would also seem to be imperative and perhaps the International Centre of Science and Technology Education may be utilised to coordinate and develop curricula and courses in the field of science and technology. This is not to say that research in humanities and

social sciences can be ignored. For getting the right type of people for higher research in the existing selected Universities. I think it is an excellent idea to have institutions like the Indira Gandhi National Open University. I would commend the extension of this experiment in stages to various regions of the country. I am aware that Gujarat is already thinking in terms of such a centre. I am convinced that it will be a move in the right direction if the opportunity for higher education has to be provided to larger segments of the population while at the same time preserving the quality of education and research at the higher centres of learning. Modern communication technology along with audio-visual techniques should greatly facilitate the open university system. The earlier this work is started in Gujarat the better it will be for everyone.

The second difficulty which I anticipate arises primarily out of non-availability of data with respect to manpower requirements. On the one hand we have the proud privilege of claiming India to be the third largest country with scientific and technological talent. On the other hand, we have the sorry spectacle of almost 20,000 engineering graduates without a gainful employment. This has resulted not only in brain drain but also in upsetting calculations regarding use of trained manpower. We have to have a scientific study to assess manpower requirements in various areas so that both short-term and long-term strategies can be worked out in overall national interests. The Planning Commission, Centre for Applied Manpower Research and the University Grants Commission will have to collaborate with a view to realistically assessing manpower requirements in various fields and linking them up with re-designing of courses and admission policies.

The third problem to my mind would relate to the quality of teachers in the existing centres of higher education. It is true that the present system does not accord teachers a proper economic and social status, opportunities for professional and career development, initiative for innovation and creative work and proper orientation in concept, techniques and value system to fulfil their role and responsibilities. The success of the policy will depend on the right motivation of teachers. You might like to deliberate on this issue to examine how best to design orientation programmes, refresher courses, etc., besides encouraging teachers to initiate a new culture of work and research. Apart from microcosmic arrangements providing for first class libraries, common servicing facilities including computer and other facilities for information storage, inter-university, macrocosmic processes for consultation and general promotion of interaction between researchers,

beneficiaries, and academics will also have to be thought of.

All these lead ultimately to the final problem of resources. It is true that the Parliament has guaranteed all available resources for the implementation of the new policy; but experience has shown that when priority sectors are contending for scarce resources, social sectors always receive an unfair drubbing. Measures for effecting economy in the event of financial crises commence with pruning of social services. I sincerely hope that this would no longer be the pattern now in view of the commitments made. But it will still be necessary to supplement State resources. Gandhiji at one time had advocated private funding of higher education ('Harijan', 2-10-37). He clarified later by saying that State assistance would be needed in certain areas but university teaching should become self-supporting ('Harijan', 25-8-46). In the present context, this may appear difficult of achievement, but I do not see why State funding should not be adequately supported by agencies which are likely to be direct beneficiaries of research

projects. This is a common pattern in the West and it should be worthwhile looking out for industries and other philanthropic bodies to sponsor utilitarian courses or even goal-oriented research projects. The proposed national apex body for covering higher education in general and agriculture, medical, technical, legal and other professional fields in particular, could play an important role not only in effecting greater co-ordination but also in developing inter-disciplinary research and sources of funding for such research.

The country legitimately expects the new policy to deliver the goods both in terms of national progress and individual advancement. This to a very great extent will depend on what our higher seats of learning are able to do. Let it not be said in the years to come that they were not able to provide the necessary leadership. This is both a challenge and an opportunity and I am sure your deliberations will suitably prepare the ground for the successful implementation of the new education policy.

I have great pleasure in inaugurating the Convention.

Presidential Address

By

Prof. S.V. Chittibabu
Vice-Chancellor, Annamalai University

May I at the outset express my feelings of thankful gratitude to the Association of Indian Universities for according me the coveted privilege of addressing this assemblage of eminent Vice-Chancellors, distinguished educationists and esteemed guests, on this memorable occasion when the A.I.U. is holding its sixty first Annual Meeting here in Ahmedabad, the capital city of Gujarat, the Karmabhoomi of Mahatma Gandhi wherefrom he crafted his political philosophy of non-violence. This Conference takes on a dimension of considerable significance in the context of the New Education Policy formulated and promulgated by our Central Government at the instance of our dynamic, innovative and imaginative Prime Minister, Shri Rajiv Gandhi who in unequivocal terms has openly declared his wholehearted support to the proposed reconstruction and revitalisation of our educational system, which according to him will be deemed to be one of the national priorities receiving his Government's goal-directed attention. We have before us not only the 'National Policy on Education, 1986' but also a Programme of Action for the implementation of the policy as brought out by the Ministry of Human Resource Development headed by Shri P.V.

Narasimha Rao a versatile educationist and creative thinker of great distinction. Much is expected of us and our Universities at this juncture in the vigorous and purposeful implementation of the policy in keeping with our specific roles, responsibilities and commitments. As the National Policy resolution rightly says there are moments in history when a new direction has to be given to an age-old process and one such moment has emerged today, posing a challenge of no mean magnitude to us, a challenge that calls for the galvanisation of our efforts for reinforcing the national and integrative character of education and promoting its excellence at all levels throughout the country. Our discussions and deliberations in this Conference will prove meaningful and fruitful, if only we could spotlight some of the issues in higher education and suggest ways and means by which they would need to be tackled with meticulous care, great sensitivity and a sense of rigorous discipline. A few of the issues that I would like to briefly dwell upon in my address may not be new to my learned colleagues here. But I feel that it would be appropriate for us to re-examine them critically identify the complexities and complications that hamper our endeavours

to make education creative, productive and effective and suggest pragmatic prescriptions for the political policy makers to consider and act in such a way as to retrieve the lost image of our Universities as time-honoured citadels of the mind and the spirit and as pace-setters in well-motivated action.

It is with agony and anguish that we are witnessing today the creeping inertia and decadence that has overtaken many of our universities today because of petty intrigues, power politics, extraneous interferences, vested interests, academic quackery, stultifying obscurantism and growing cynicism. Conspicuous lack of adequate participation and involvement on the part of educationists, teachers, students and the administration has led to our centres of higher learning degenerating into shelters of mediocrity and emptiness. With their idealism waning and vision fading our Universities by and large are just sustaining themselves still as mere centres of examination, operating creaky and leaky machineries for churning out diplomas and degrees of no value in the employment market. With the mushrooming of colleges and universities and the rapid rise of enrolments there is hardly any scope for experimentation, innovation and quest for excellence. Quality has been grievously defaced and defiled, fractured and fragmented. Consequently mediocrity has gained the upper hand and it is this that sets the stage for communal fracas, language turmoils, rampant corruption and value erosion. If mediocrity is to be replaced by excellence, individuals should be developed to the limit of their potentialities by recognising their individual differences and providing relevant education to them in harmony with their immanent talents, traits and aptitudes. In this way our Universities can sow seeds of human creativity, nurture their growth for fruit and harvest and promote values of culture and humanism.

For the fulfilment of this objective, "the University System", as the Programme of Action of the National Policy on Education puts it aptly "should be enabled to move centre-stage". This calls for dynamism of a high order on the part of our Universities—dynamism that results in positive action. Consolidation and expansion of institutions of tertiary education, development of autonomous colleges and autonomous departments, revamping and redesigning of curricula, innovations in teaching methodologies and evaluative techniques, strengthening of research and training and re-orientation of the faculty, creation of an intellectual climate conducive to the pursuit of scholarship, efficiency and excellence, providing for mobility of teachers—all these are strategies which have been rightly

underscored in the Programme of Action. The suggested Task Force to be set up by the UGC should come into being immediately and it needs to evolve clear guidelines for implementing these strategies with a sense of urgency. Developmental programmes as well as schemes for improving the existing facilities in colleges and universities demand adequate provision of financial resources both by the U.G.C. and the State Governments. In fact, echoing our views on the issue of financing of higher education, the A.I.U. has already urged the Central Government that a reasonably high level of funding for tertiary education should be ensured by raising the allocation from the prevailing 3.7% to 6% of the G.N.P. It has been stressed that at least 7% of the total outlay under the Seventh Plan should be made available, thereby restoring the position as it obtained under the First Plan. Further, 25% of the Education Budget must be set apart for higher education. It is heartening to note that the N.P.E. has now assured that the outlay on education will be stepped up to the extent essential for policy implementation in the Seventh Plan and that from the Eighth Plan onwards it will uniformly be over 6% of the National Income. Funding procedures need to be redefined and simplified. It is expected that the existing system of university finances would be suitably reorganised on the basis of the criteria that universities should be treated with understanding and imagination and that while there should be some inevitable safeguards in financial matters and reasonable economy in expenditure, sufficient grants should be extended for enabling the recipient institutions to discharge their administrative and academic obligations with speed and efficiency. What is considered necessary is that the grant-giving authority should refrain from exercising too much control and adopting a rigidity of approach in the name of checks and balances, as this attitude would act as a road block impeding the smooth administration of university finances. The system of block grant should be so reorganised that there is provision for a triennial revision of the grant on a rolling basis, taking note of unavoidable increases of expenditure consequent on escalation of costs, and the need for special grants in times of unforeseen developments and leaving a "cushion" to be freely operated at the discretion of the universities. A holistic view of university finances has to be taken both by the U.G.C. and the State Governments so that the finances of universities are put on a sound and stable footing. The Association of Indian Universities has been time and again emphasising that this issue should be given due attention on a priority basis by the powers that be and it is earnestly hoped that under the dispensation of the present 'National Policy on Education' the university

will be freed from fiscal emasculation and given the needed financial elixir,

Of late one of the tortuous and perplexing tasks that the A.I.U. has necessarily to undertake is the one relating to university autonomy which has now come under severe strain because of frequent amendments of University Acts on the basis of considerations other than academic. These amendments have adversely affected the prestige and status of the universities, much to the dismay and profound concern of not only the academic world but also those who have evinced dispassionate interest in higher education. As the Kothari Education Commission has rightly stressed "the case for the autonomy of universities rests on the fundamental consideration that without it, universities cannot discharge effectively their principal functions of teaching, research and service to the community" and "only an autonomous institution free from the regimentation of ideas and pressure of party or power politics can pursue truth fearlessly and build up in its teachers and students habits of independent thinking and a spirit of enquiry". But what is happening today is that instead of the inroads into university autonomy being contained governmental control and official interference have been steadily increasing, thereby making the university an extension wing of the Department of Education. This unhealthy trend is manifesting itself through the disquieting unrest on our campuses. It has to be conceded that there is the other side of the coin which cannot be easily explained away, namely the crisis and chaos arising out of the glaring maladministration of the University by men at the top who abuse their power in collusion with power-seekers and intriguers and indulge in corrupt practices in matters of students admissions, staff appointments, college affiliations, building contracts, equipment purchases etc. In instances like these government find an ostensible reason to interfere and proceed against the transgressors! There are no doubt drawbacks and deficiencies in the functioning of Universities. And for rectifying them there needs to be an in-built machinery within the university structure that will deal with lapses promptly and sternly. But when the Government assumes such powers as dismissing or suspending a Vice-Chancellor, affiliating or disaffiliating colleges or granting permission for setting up educational institutions over-riding the decisions of the university in an arbitrary manner, one cannot help observing that university autonomy is well on the road to an unceremonious burial. In recent years dangerous precedents have been set up when in certain States 'unwanted' and 'inconvenient' Vice-Chancellors have been eased out in subtle ways. The A.I.U. has naturally felt compelled to register its pro-

test against such insidious attempts to besmirch the image of Vice-Chancellorship, particularly at a time when universities are given the call to gear themselves to the onerous task of playing an active and positive role in "critical examination, evaluation and evolution of concepts and policies over the entire spectrum of the society's concern and involvement". One of the suggestions put forth is that the appointment of Vice-Chancellors should be governed by the over-all consideration of academic merit, administrative experience and expertise or such other relevant distinction, uninfluenced by political pulls and back door pressures. The stand taken by the A.I.U. on the issue of university autonomy, I wish to point out, has evoked an encouraging response from those at the helm of affairs at the Centre. What has been represented is that with regard to university autonomy and academic freedom, the place of the Chancellor and the Vice-Chancellor in the university set up, autonomy within a university, 'autonomy within the university system and autonomy in relation to outside agencies, a comprehensive central legislative measure would go a long way in setting things aright and generate a cordial atmosphere of better understanding and cooperation. We, as members of the A.I.U. should project association as our effective spokesman voicing forth our considered views and ideas, shared hopes and expectations.

It is accepted by one and all that higher education in India needs to be thoroughly reconstructed because in spite of many reforms suggested by various Commissions and Committees set up by the government from time to time, the process of higher education was rendered ineffectual by confusion of aims and purposes and want of definitive policies and meaningful choices. Pressures and slogans instead of the rational objectivity of facts and the reality of emotional drives and motivations guided our policies with the result a widening chasm developed between educational planning and implementation. The conspicuous lack of management structures and material resources, the magnitude of new tasks, lacklustre efforts, misplaced priorities, unconscionable negligence and hypocrisy on the part of ruling establishment—all these factors vitiated our endeavours in the past to effect the needed transformation of the educational system as a potential instrument of change in the context of national development and social uplift. The present National Policy on Education, having taken note of the causes for the retarded growth of education in the past, bids fair to usher in a marked departure from the groove we have got into. It is charged with the necessary motive force to give thrusts in new directions. The policy framers, planners, administrators and decision-makers are all now being

brought together to act in concert. Quantitative, qualitative, spatial and temporal objectives have been enunciated, the demands of equity and excellence have been recognised and priorities have been identified and the fundamental issues have been set out in the light of constraints not only of financial resources but also of the political, social and cultural milieu. The process of preparation has commenced with the setting up of several Task Forces and both the Centre and the State Governments have come forward to shoulder their responsibilities that the National Policy has cast on them. With the unique opportunities extended to our universities, we must extricate higher education from the clutches of its pedestrian role and energise it in such a way as to make it the centre and focus of India's intellectual vibrancy. As Sir Eric Ashby has rightly cautioned, our universities should cease to be alien implantations and stand out as India's veritable culture-bearers striving to serve as the "conscience of the nation" and as "assessors of the national way of life". The present is the road that links the past with the future. To pinpoint this and outline a correct perspective is one of the primary functions of higher education. As our society is being forced into new dimensions of thought, perception and action under the impact of pressures of new relationships, new tools and new channels of communication, it is incumbent on the part of the universities as change agents to help our people to be creatively alive and recognise the distinction between mere imitation and assimilation. As our late Prime Minister Shri matu Indira Gandhi would put it, "you cannot be a gardener, if you collected only potted plants". Our centres of higher learning must fuse in a creative way the numerous movements initiated by the thinkers and leaders of our nation in the last one hundred and fifty years from Rajaram Mohan Roy to Shrimati Indira Gandhi. This fusion must emerge from honest conviction and faith in India's cultural ideals and values.

In this context, I would like to invite your pointed attention to the burning question of national integration which, we must admit, continues to be imperilled by the malefic influences of religious fanaticism, regionalism, linguistic chauvinism and casteism. It is most distressing that our country should still be the scene of petty political squabbles, linguistic wrangles, religious clashes, boundary conflicts, river water disputes etc., even after about four decades of independence. Strong bastions of vested interests fomenting traditionalism, obscurantism, separatism and groupism have entrenched themselves and these are eating into the vitals of national unity. The pressing need of the hour is a war on the sinister forces working either covertly or overtly against national interest. It is here that our universities

along with other educational institutions should vigorously and assiduously endeavour to create a climate of intellectual and emotional dimensions to generate sentiments and feelings of national solidarity and unity. This means that higher education as well as other levels of education must be so reconstructed and reoriented as to train and equip individuals with those essential qualities that bring about greater understanding between communities and an atmosphere of goodwill, peace, harmony, concord and happiness. This task, which is by no means an easy one, needs to be undertaken on a warfooting. We need what William James called the "moral equivalent of war". Our educational programmes and projects must penetrate through all barriers of protocol, bureaucracy, language, culture and political geography into the minds and hearts of the people. They should be our "*punta de lanza*"—point of the lance, which being hard and focused reaches its target. Great efforts are needed to eliminate discrimination, banish poverty and liquidate illiteracy. By way of animating these efforts, institutions of higher learning must stand out as nodal centres of response and instruments of constructive change in the psychosocial, economic and political spheres. Fortunately, they have now opportunities galore to evolve and foster desirable behaviour patterns in daily life situations that show up the tolerance of differences in inter-group relations, thanks to the inter-university sports and cultural festivals that are being organised and conducted by our A.I.U. with funds provided by the Ministry of Sports and Youth Affairs. The Association, I must say, has now addressed itself to the work of promoting cultural meets of university students and of supporting the university choir and orchestra programmes and thereby inculcating in them a sense of mutual respect, understanding and appreciation of different cultures, traditions and ways of life of different sections of the people of the country. Let us extend our wholehearted support and cooperation to this laudable nation-building venture of the A.I.U.

After many years of futile search for easy solutions to vexed problems, our policy makers have now realised that our educational system must not only prepare scientists, technologists, doctors and engineers but also train the learners to develop traits and qualities of leadership in different spheres of human endeavour. It has been rightly reiterated that Indian education must be socially relevant and need-based. Our educational policies and schemes require to chime with our national goals and aspirations. This is possible only if a proper value system is designed and inter-linked with our social planning through education. An even-handed policy of education should lay due stress on the essential

social and moral values like fellowship, tolerance, patriotism and humanism which go to strengthen the basis for the moulding of national character. A most worthwhile recommendation made by educationists is that it should be made compulsory for students of science to have some background of humanities. Even so any student of humanities must take courses in science. This move will be in response to the present call for humanising the sciences and scienticizing the humanities. The point is that our university products must not only be well-trained in professional skills but also be made conscious of their social and moral obligations and responsibilities in a participatory democracy. It is true that some of our technological institutions have adopted this approach, which however does not form part of a well-designed and well-regulated method. It is necessary that all our universities take a genuine interest in this matter and actualize the purposeful and goal-directed scheme of motivating students to imbibe the right scientific-cum-humanistic attitude and spirit that will be the sheet anchor of their social and national endeavours.

One of the serious dilemmas tormenting higher education is the deterioration in standards arising out of the mechanisation and routinisation of teaching and evaluation consequent upon the admission of an increasing number of students to universities and colleges. We do not any longer see the interpersonal contact between teachers and students which was possible when classes were compact and manageable. With more and more centralisation of curriculum-designing, prescription of books and modalities of examination, teachers of affiliated colleges, who have very little or no say in the evaluation of their wards have become very much examination-oriented. The students are led to attach disproportionate importance to external examinations which put a premium on their memory rather than testing their all-round capabilities and talents. This has resulted in the mushrooming of tutorial colleges of dubious reputation to which anxious students flock for getting the coaching needed to get through the ordeal of examination at any cost. The scale on which mark sheets and performance records are manipulated or admissions and certificates are granted for a consideration is so large as to make many believe that corruption is the ruling order in higher education. It is a thousand pities that despite our being aware of the widening cracks in the present examination system, most of the universities have developed cold feet and would not take the initiative to carry out the minimum programme of examination reform as enjoined on us by the U.G.C. It is true that here and there some universities have undertaken the overhauling by introducing internal assess-

ment, redesigning the question papers and providing necessary administrative safeguards against hocus-pocus of any kind. But a concerted attempt must be made by the entire fraternity of universities to thoroughly streamline the system, ensuring greater reliability, objectivity and validity. The services of the Research Cell of the A.I.U. which has done worthwhile research into problems of evaluation, apart from organising several seminars and training courses for the benefit of college and university teachers may be profitably utilised for effecting the desired change. The U.G.C., we are happy to note, is only too willing to fund the Examination Reform Units wherever they are sought to be set up by universities. Developing question banks to assist paper-setters, ensuring objectivity in evaluating answer scripts, declaring results in terms of marks/grades subject-wise instead of overall divisions and pass/fail, experimenting with open book examination, diagnostic evaluation introducing flexibility in curriculum development and combination of courses, integrating evaluation with the process of teaching and learning—these are some of the essential reforms that our universities would do well to attempt with a view to making the evaluative process genuinely effective. It is a happy augury that the Ministry of Human Resource Development is planning to institute a National Testing Service which will develop a quality control device to organise nation-wide tests on a voluntary basis and to evolve parameters for comparability of performance. I may suggest that the A.I.U.'s Research Cell which has already developed some expertise in this regard may be involved in this innovative venture of the Ministry.

"So long as a nation's rural life is vigorous it possesses reserves of life and power". Such is the forceful utterance made in the Report of the Radhakrishnan Education Commission—In the colonial era the elitist character of higher education lent support to the hegemony of the urban sector at the expense of the rural countryside. But now it is realised by the national leadership that for India's economic growth along with democratisation, equity and social justice, rural development programmes constitute a desideratum of national significance. Several Committees and Commissions have laid emphasis on the necessity and feasibility of involving the universities in the massive task of integrated rural development. Our society today expects the universities to be academic citadels, frontiers posts and service stations all at the same time. Because of the availability of expertise and trained manpower it should be possible for the universities to assess the developmental potential in our rural settlements, survey the resources of men and material available and plan

for their rationalisation. Several tasks need to be undertaken for achieving the ends of integrated rural development. Improving school education, spreading functional literacy, developing the idiom to communicate with the shrewd villagers effectively using mass media to enlighten the rural folks on problems of family planning, health nutrition, hygiene etc., training rural development workers, designing appropriate technology which is location-specific—these are, to mention a few, diverse ways by which the universities can play a key role in the uplift of the rural masses. In short, the vitalisation of higher education calls for the mobilisation and imaginative development of the inter-disciplinary resources of the universities for transforming rural settlements into havens of prosperity and good living.

We are today witnessing, what a Unesco expert has aptly termed, a "Copernican Revolution"—a shifting of the centre of gravity of educational thinking and research from the teacher-centred mentality to the pupil-centred approach. The change may be said to signify the decentralisation of learning. Rightly has the N.P.E. underscored the pressing need for democratizing education through both formal and non-formal systems. The dilemma presently faced by the universities is that with the establishment of a network of correspondence institutes under the programme of non-formal education of which distance education is a part they have to project the profile of distance education not as a mere substitute for conventional education, nor even as a competitor but as an "arm of support for formal education". Viewing distance education as a supporting arm naturally "excludes any suggestion of encroachment or eventual replacement". Distance education along with the formal system fulfils certain definite purposes. It is wrong to presume that the latter has outlived its use altogether and as such another system of education is nowadays being pressed into service. Certain social development as well as scientific advancement and technological progress have contributed to the rise of distance education as a complimentary structure growing side by side with the formal system. In recent years the number of those who knock at the doors of universities has been burgeoning to an unmanageable extent and an alternative system to cater to their educational needs has become an imperative. Besides, the idea of life-long education has come to be recognised as the keystone of a learning society. We cannot depend on the conventional system of education to deliver the goods in this respect. To quote the words of the Unesco International Commission, "education should be dispensed and acquired through a multiplicity of means and the important thing is not the path an individual has followed but what he has learned and acquired".

While the significant role of distance education has come to be appreciated more and more, what is causing concern to us is that because of some unplanned expansion, diversity, duplication and confusion, correspondence institutions under distance education programmes appear to be isolated not only from the mainstream of education but from each other as well. There is little exchange of ideas, innovations or research. For this very reason only the A.I.U. set up recently a Task Force to make an indepth study of the role, functions and responsibilities of Distance Education in India and make suitable recommendations for qualitatively improving its offerings through flexible modules of teaching and learning and the judicious use of communication technologies. Its report is ready and the user will, I am sure, find it to be a meaningful and useful hand book providing pragmatic guidelines for making distance education multi-dimensional, buoyant, resourceful, cost effective and result-oriented. The National Conference on Distance Education which is due to be held as part of this Annual Meeting of the A.I.U. will be deliberating on the various aspects of Distance Education in the light of the creative leadership that the Indira Gandhi National Open University is expected to furnish for the State Open Universities as well as those universities running distance education institutes with a view to making the latter maintain standards through planned strategies designed to strengthen their delivery system.

Friends, I am conscious of the limitations of time and let me come to my concluding observations. The A.I.U. as the only apex-body representing our universities has registered its notable progress in experience and prestige. Housed comfortably now in a spacious and an elegantly constructed habitation of its own, thanks to the generous benefactions of the Ministry of Human Resource Development and member universities, that have made this possible, it is poised for discharging its assigned functions and responsibilities with greater distinction and serving the member universities as their doughty spokesman while presenting their views on common problems and matters of high policy relating to tertiary education before the Central and State Governments, the U.G.C., I.C.A.R., C.S.I.R. and such other national bodies. I must express my grateful thanks to Dr. Jagdish Narain, the Secretary of our Association who with a commendable sense of commitment and devotion has been acting as a cohesive force bringing our universities together and promoting their mutual understanding and cooperation in all ways possible. The administrative staff as well as the academic personnel of the A.I.U. have spared no pains to see that the fair name of the organisation remained

unsullied. What is more, they have been working hard, with zeal and enthusiasm in the larger interests of the A.I.U. and I must thank them sincerely for their unremitting service.

One word more and I will have done. In spite of the many trials and tribulations that we as Vice-Chancellors have to go through as part of our occupational hazards, there should be no let-up in efforts to prove ourselves to be not merely able but effective as dedicated administrators. More than our ability, it is our effectiveness that is considered important by management wizards. There are some really significant contributions that only we can make. Let us make sure that we make them. The most expensive and yet the most wasted resource is time. For effective administration we must for certain know where our time goes and where it ought to go. We must set our priorities and abide by our priority decisions. Even so we must look for strength and build on strength, especially on the strength of people, enab-

ing the really first-rate people to do a first-rate job. As advised by David Lloyd George, "we should not be afraid to take a big step if one is indicated, for we can't cross a chasm in two small jumps". Let us hitch our wagons to the stars, not to the street lamp posts, for which we need to cultivate a sense of creative vision which means constant awareness and relentless training of the mind and spirit. I would like to end my address with the memorable words of an erudite poet who speaking of "things that are more excellent" has this to say;

*The gains of science, gifts of art;
The sense of oneness with our kind;
The thirst to know and understand;
A large and liberal discontent;
These are the goods in life's rich hand;
The things that are more excellent.*

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AMERICAN STUDIES RESEARCH CENTRE

HYDERABAD - 500 007

SUMMER COURSE ON AMERICAN CIVILIZATION

May 18 - June 17, 1987

As last year, the ASRC will give a course on American Civilization during the summer of 1987 for the benefit of those scholars who have no adequate knowledge of American Civilization. The course will be equivalent to the pre-doctoral program given in some Indian universities. It will be an inter-disciplinary survey of the main currents of American thought from the colonial period to the present-day. It will be taught by experienced faculty, both Indian and American. Those who will participate in the course will be required to write term papers, to prepare bibliographies as part of research methodology, and to take written and oral tests. Grades will be given at the end of the course on the basis of the cumulative performance of the participant in various examinations. The aim of the course is to bring scholars from several subjects together under a broad discipline of American Studies in which one discipline helps understand the other and several disciplines contribute together to understanding the richness and complexity of American Civilization.

Persons teaching American subjects in colleges and universities and scholars planning to register for M. Phil./Ph.D. degrees in Indian universities are eligible to apply for participation in the course. Although the ASRC will give a few fellowships to deserving candidates, we suggest that the person wishing to apply for the course ask for a travel grant from his/her institution or other appropriate funding agencies. The application should reach the Centre by March 31, 1987.

Application forms will be supplied on request.

COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH

ADVERTISEMENT No. 15/86

It is proposed to appoint one Scientist-F for the Regional Research Laboratory, Jorhat.

The R & D work of the laboratory is organized in the following areas: Applied Civil Engineering, Chemical Engg., Coal, General Engineering, Biochemistry, Inorganic Chemistry, Medicinal and Economic Plants, Natural Products Chemistry, Organic (Synthetic) Chemistry, Drugs and Pharmaceuticals, Papers and Boards, Geosciences, Petroleum and Natural Gas, Analytical Services, and Electronics and Instrumentation. It has a well equipped laboratory for carrying out high quality R & D work in the above areas.

Job Requirement

This is a senior management position requiring (1) R & D managerial skills, (2) ability to introduce modern chemical engineering orientation to R & D problems, (3) ability to coordinate time targetted interdisciplinary projects and developing know how packages with basic engineering inputs, (4) capacity to plan and design multi-purpose and specialized pilot plants.

Qualification and Experience

Ph.D. in Chemical Engineering with about 10 years of R & D experience in process development, process design, computer aided design and modelling of chemical process systems. The Scientist must have proven experience of coordinating process development and design engineering activities in a reputed research or professional organisation.

Salary/Conditions of Service

The scale of pay attached to this post is Rs. 2000-125/2-2500 plus allowances as admissible under Central Govt. Rules. This is a contractual appointment initially for a period of six years. The contract is extendable and the incumbent can also be confirmed. Consultancy subject to an upper limit of Rs. 15,000/- per year is permissible. Free medical aid and leave travel concession are also permissible for the family as per Govt. rules. Residential accommodation will be provided on payment of usual licence fee subject to availability.

Age

Preferably below 50 years, relaxable in deserving cases.

A duly constituted 'Screening Committee' will decide on the number of Scientists to be invited to meet the full Selection Committee for discussion. The decision of the Council in this behalf will be final. Applications from employees working in Govt. Depts., Public Sector Organisations and Govt. funded research agencies will be considered only if forwarded through proper channel and with a clear certificate that the applicant will be relieved within three months of receipt of the appointment order.

Those interested may kindly send in their curriculum vitae in duplicate in the form obtainable from the Joint Secretary (Admn.) Council of Scientific and Industrial Research, Rafi Marg, New Delhi-110001, on or before 21-1-1987. The literature about the laboratory, if required can be had from the office of the Director, RRL, Jorhat - 785 006.

GOALS FOR EDUCATION

Shri K.C. Pant, Union Minister of Steel and Mines delivered the Convocation Address at the Twelfth Annual Convocation of the University of Kashmir, Srinagar on 15 October 1986. Reproduced below are excerpts from Shri Pant's thoughtful address.

India's past was glorious; its vitality was so powerful that there has been a remarkable continuity in Indian history in spite of great changes and transformations. But even as we draw strength from the past, we grapple with the problems of today and bend all our energies with faith and resoluteness to the task of building a great future. There are pessimists and cynics who belittle our achievements and they want to convince us that the future is bleak. There are, on the other hand, dreamers who play down our difficulties, and try to convince us that everything is fine under the

but it is also an indispensable requirement for the development of nations and peoples. It is also an acknowledged fact that education provides the key to the priceless treasurehouse of knowledge and ideas that have been left behind by the best minds over the ages as the common heritage of mankind. We must also realise that education is a profound science and art, as much an aid in the individual's journey of self-discovery as a means for accelerating social progress. But precisely for these reasons, the task of the educationist is difficult and unenviable. As educationist

Convocation

shining sun. As seekers and students, it is for us not to accept any bias but to look at things in the right perspective and with realistic objectivity. We shall then realise that we are confronted with formidable difficulties but also that difficulties are made to be overcome. Freed from cynicism, we shall gain courage and confidence, and freed from facile dreaming, we shall take up our task with seriousness and sincerity.

It is no more a matter of debate that education is not only an inevitable activity embedded in the very nature of consciousness,

has perforce to be a man dealing with the past and yet not clinging to the past. He has to be a futurist. He has the responsibility of inventing and engineering the tools and means by which the youth of today can be empowered to meet the challenges of tomorrow.

Considering the fact that, with the frantic pace of change, the future is not going to be a mere prolongation of the present, considering also that today the future of humanity is in a balance, the task of the educationist is, in a sense, unprecedented. As we look around, we find ourselves tied to the narrow

problems of localities and regions. As we look at the wide space above us, we find men in space-ships, daring to dream of uncharted voyages where the boundaries of time and space may even seem to disappear. In between, there are threats of nuclear armaments, and star wars. What kind of future can we envisage in this situation? And what kind of education should we fashion for our young people?

There are rapid changes in all spheres of life. There is exponential growth of knowledge. Science and technology, in particular, are transforming the world so rapidly that today's science fiction becomes tomorrow's reality. The recent developments in electronics and robotics, in genetics and surgery, are truly breath-taking. The application of laser technology in various fields, particularly in the fields of medicine and communications, is astonishing. The question that poses itself is how can we equip our young people with the knowledge and skills required to enable them to absorb these advances and keep themselves on the frontline? We must also keep in mind that Indian students have certain specific problems which are unique. Our students are required to absorb the lessons of a long, continuous and complex national history; the geography of our country has the dimensions of a sub-continent; we have multiplicity of languages, and even our three-language formula leaves out the claims of our own classical languages. Our colonial past has greatly conditioned our mentality; we have to break its limitations and perversions and assimilate all that is modern and progressive. The Indian situation is full of disparities, and we are committed to remove these disparities and provide equal opportunities to all our citizens. This means harder work,

greater discipline, higher production and productivity. The wealth of this vast and rich land has to be harnessed for ending the poverty of its people. As none of this is possible without education, the question is: how soon can we make education universal and our educational system truly national and capable of equipping our young people to meet the challenges awaiting them?

Questions of this kind provided the backdrop to the challenging exercise of formulating a new educational policy. We sought the collaboration of leading educationists and involved in a nationwide debate, all sections of people who have direct or indirect relationship with education. We were aware and appreciative of the fact that we could look back on significant achievements, recorded over the years since Independence, but we were equally conscious of the shortcomings. We first prepared a Status Paper, which was a kind of critical appreciation of the bright and dark sides of our educational system, of its infrastructure and super-structures, of its inner health and malady. This Status Paper, entitled, "Challenge of Education", was thoroughly discussed in debates, seminars, conferences, newspapers and journals. The feedback came in torrents, and the harvest was rich. All this went into the drafting of the new policy. The draft was examined by the Central Advisory Board of Education, the National Development Council and the Parliament. And if I am not revealing a secret to you, may I say that the Prime Minister himself bestowed every care to go through the entire draft of the policy statement.

But it was not enough to announce the policy. We have also now a Programme of Action. And if you

examine it carefully, you will find that the proposals which have been made are both desirable and feasible. I wish to refer to five of them, which, to my mind, are crucial. The first relates to the programme of universalisation of elementary education. The second relates to the removal of disparities, and here special emphasis is laid on education for women's equality, education of the scheduled castes, scheduled tribes and education of the handicapped. Care has been taken to provide incentives and facilities for educationally backward sections and areas and minority groups. The third programme, named 'operation black-board' is for providing the minimum infrastructure and facilities to schools all over the country. The

fourth relates to the open school system, the open university system and the rural university system. And the fifth relates to advancement and coordination of research. These programmes provide the large canvas. There are, however, two important reforms which promise to provide a new thrust to education. The first is examination reform at all levels of education and delinking of degrees from jobs. The second is the emphasis on vocationalisation, value education and personality oriented education.

It is sometimes asked whether the ideals and goals that we have set out in our new educational policy will really be actualised, considering the gravitational pull of the environment in which our present

UNIVERSITY OF KASHMIR

1985-86

HIGHLIGHTS

- * Number of students rose from 1700 to 2150.
- * Number of teachers increased from 219 to 244.
- * 29 thousand students appeared in various examinations at 267 examination centres.
- * A new faculty of Non-formal Education set up.
- * Augmented Talent Promotion Scheme for Teachers whereby teachers are deputed to various centres of academic excellence to acquaint themselves with latest developments in their respective fields and exchange ideas with eminent scholars.
- * Department of Science and Technology, Govt. of India, has identified the University as a national centre for academic and scientific conferences and sanctioned a grant of Rs. 18 lacs

to add another wing to University Guest House and improvement of audio-visual facilities.

- * A Media Education Research Centre is proposed to be set up shortly.
- * A consortium of universities comprising Jawaharlal Nehru University, Banaras Hindu University, Aligarh Muslim University, MS University of Baroda, Poona University, University of Madras and University of Kashmir has been formed to promote national integration. The consortium will work out programmes of academic and cultural exchanges between member universities.
- * The University has acquired a VAX 11-427 Super Mini Computer out of a UGC grant of Rs. 36 lacs.
- * A Model School is also proposed to be set up on the campus.

life styles are being shaped and developed. It is, for instance, asked as to how we can have value-oriented education when there is narrowness of outlook and even corruption in our society. The question is, indeed, very pertinent. But I put a counter-question: what force other than education can uplift a society that is being pulled downwards by gravitational pulls? Therefore, whatever the difficulties we must be firm, clear-sighted and single-minded while persevering to secure the highest ends of value-oriented education. Many such questions and counter-questions can be posed. To my mind, the task is difficult but not impossible. A multi-pronged strategy is however necessary to render the situation more favourable than it is today. For instance, leaders of society should resolve to collaborate with our educational programmes. Members of legislative assemblies and Parliament must devote special attention to the problems of education. Similarly, members of other public bodies should also promote education with whose bearing concern and interest. All must pay special attention to the problems which children, adolescents and youths constantly face in the process of their development. We must produce enough learning material from which they can seek the required guidance. In fact, we must provide to students a living environment and atmosphere in which questions that are intimately related to the internal growth of faculties, skills and values are freely asked and answers readily forthcoming. All this is to say that the child, the adolescent and the youth should be in the centre of the nation's care.

The foundations of contemporary India were laid during the freedom struggle. The great leaders who guided us and led us to freedom were men and women of vision and dedi-

cation. The greatest among them were embodiments of qualities that have been prized most in our culture. They were not politicians and statesmen but thinkers and philosophers. They were also great internationalists. They gave us nationalism which embraced internationalism within its scope; they underlined the spirit of democracy embedded in ancient Indian polity and taught us how to run our emerging institutions and organisations, economic, social and political, on modern democratic lines drawing strength from our tradition of tolerance and pluralism; they insisted that the Government of free India should be secular in character, and recognising that a just and equitable social order provided the strongest foundation for a democratic structure, they embraced the ideal of socialism. Democracy, socialism and secularism came to be embodied in our Constitution. Since the achievement of freedom, we have passed through severe tests, and in spite of internal and external pressures, we have been able to sustain these ideas and they have received unanimous support from all sections of our people. This is significant considering that democracies have been snuffed out all around us, and the degree and kind of freedom that we enjoy in our country are shrinking in many parts of the world. Indeed, our tests are not over. The dangers and threats that confront us are formidable. There are groups and sections of people who are preaching and practising violence as a method of life and action. Fanaticism and religious fundamentalism have raised their ugly heads in recent years with naked brutality. Even the unity and integrity of our country are sought to be challenged. Fanaticism, regionalism and linguism seem to be spreading, and we cannot wish away the fact that some foreign hands are manipulat-

ing these tendencies in order to destabilise us. We must be specially careful of these attempts in our border states, particularly in Punjab, Kashmir and the north-east. We must stand united, and we must ensure that the cult of violence and fundamentalism is wiped out in our country. The recent attempt on the life of our Prime Minister must stir us to the deepest depths of our being. We must resolve that the tendencies that promote such attempts shall not be tolerated by the Indian people. We have already suffered two unbearable blows at the hands of communalism and fanaticism in the assassination of Mahatma Gandhi and Mrs Indira Gandhi and our heart must cry out 'NO MORE'.

A word about higher education and I am done. Higher education should not be equated with the study of a few specialised subjects. Fundamentally, higher education ought to provide to each individual the possibilities of inner enlargement. It is in the college and universities that reflective and critical abilities are sharpened and chiselled. It is here that we begin our journey to establish the right equation between ourselves and the universe. It is true that this country is in need of manpower that is professionally accomplished. But it is equally true that we need a manpower that symbolises the best of the accomplishments of Indian culture. I think this is the message of our educational policy, and I am sure that the young people who are receiving degrees and honours today will keep this message in their mind and heart and will endeavour to shape their lives and activities in accordance with this ideal. □

CALENDAR OF EVENTS

Proposed Dates of the Event	Title	Objective	Name of the Organising Department	Name of the Organising Secretary/Officer to be contacted
December 12-14, 1986	All India Seminar on Psychology, Sociology, Sports and Allied Sciences.	To acquaint the teachers and Professional personnel in Physical Education, Psychology and Sociology with the latest trends of research in Sports and Allied Sciences.	Degree College of Physical Education, Amravati.	Dr. V.D. Bapat, Organising Secretary, C/o Degree College of Physical Education, Amravati.
December 12-15, 1986	International Conference on Social Responsibility of Science	For critical analysis and evaluation of vital issues in diverse fields of Science and Technology and in diverse societal settings.	Jawaharlal Nehru University, New Delhi, in collaboration with Indian National Science Academy, New Delhi.	Prof. P.N. Srivastava, Vice Chancellor, Jawaharlal Nehru University, New Mehrauli Road, New Delhi.
December 14-21, 1986	All India Workshop-cum-Seminar on improvement in teaching of English.	To evaluate the method of English language teaching with special reference to curriculum development	Shree J.B. Thacker Commerce College, Bhuj	Prof. V.J. Jadeja, Head, Deptt. of English, Shree J.B. Thacker Commerce College, Bhuj.
December 15-17, 1986	Indian Geotechnical Conference—1986	Designed to seek a consensus on questions of current significance in geotechnical engineering relevant to the Indian context.	Indian Geotechnical Society—Delhi Chapter	Prof. Shashi K. Gulhati, Organising Secretary, IGC 86, Civil Engineering Department, Indian Institute of Technology, New Delhi.
December 15-17, 1986	National Seminar on Development of Natural Resources in North-East India.	To unfold the problems of the region to the community of geoscientists to help them engage in developmental activities.	Manipur University, Imphal.	Dr. R.P. Singh, Department of Earth Sciences, Manipur University, Imphal.
December 16-17, 1986	Seminar on Urbanisation and Regional Development	To examine the emerging pattern of urbanisation and regional imbalances	Postgraduate Department of Economics, Govt. Postgraduate College, Dharamasala (H.P.)	Dr. Narendra Awasthi, P.G. Deptt. of Economics, Govt. Postgraduate College, Dharamasala (H.P.)
December 16-18, 1986	International Symposium on Electronic Devices, Circuits and Systems	To provide a forum to research workers all over the world for exchange of information and technical perceptions in electronic devices, circuits and systems.	Indian Institute of Technology, Kharagpur.	Prof. N. B. Chakrabarti, Department of Electronics & Electrical Commn. Engg., IIT, Kharagpur.
December 22-25, 1986	National Symposium on Quantum Electronics	To discuss the latest developments in Quantum Electronics	Department of Physics, Cochin University of Science and Technology, Cochin.	Dr. M.G. Krishna Pillai Prof. & Head, Department of Physics, Cochin University of Science and Technology, Cochin.

Lasers in Industry

Twenty senior engineers and technologists representing various prominent industries in the State took part in the one-day intensive Workshop on 'Lasers in Industry' organised by the Physics Department of the Cochin University of Science and Technology, in collaboration with the Indian Institute of Chemical Engineers, Indian Physics Association (Cochin Chapter) and Indian Institution of Standard Engineers.

Inaugurating the Workshop the Vice-Chancellor Dr. K. Gopalan explained how laser revolution was sweeping the world. Laser was a new searchlight revealing things we could never before see, make or measure. Today there was hardly any branch of science, technology, industry, communication, defence and entertainment that remained unaffected by the laser revolution. In industry, high power lasers found a variety of uses. Lasers were now commonly used for cutting, drilling, welding, materials processing, measurements, scribing, annealing, surveying, remote sensing and so on.

The Workshop included lecture demonstrations by experts. Participants of this workshop were engineers, scientists and technologists interested in working in laser-related fields in their respective organisations. Prof. C.P. Girijavallabhan was the co-ordinator of the programme which was initiated by the Centre for Sponsored Research and Consultancy of the Cochin University of Science and Technology.

The industries represented at the Workshop included: HMT, FACT, Tata Oil Mills, Travancore Titanium Products Ltd., Premier Tyres, Premier Cable Co., Hindustan Latex Ltd., Indian Aluminium Co., KITCO, Cominco Binaai, Periyar Chemicals Ltd. and Western India Plywoods.

Plea to Revamp Commerce Education

A One-day seminar, organised jointly by the National Council of Educational Research and Training (NCERT), the Indian Institute of Education, Pune and the Symbiosis Society's College of Arts and Commerce, Pune stressed the need for revamping of commerce and management education in the country.

The seminar, which took place at the Symbiosis College of Arts and Commerce, was attended by many prominent teachers of commerce education. Speaking on the subject, "Crises in Commerce Education", chief guest Principal P.L. Gadgil, Pro-Vice-Chancellor, Poona University, said that what is basically lacking in today's educational system is the lack of quality which really needs to be improved upon. Stressing the fact that the main culprit was the semester system, he was glad that system was now abolished and a new system implemented. Mr. R. Pardeshi, Divisional Secretary, Maharashtra State Board of Higher Secondary Education, said that education in the country had always been based on a theme that whatever is placed before the students should only be learned. This was a wrong attitude and had to be changed, he said.

Amongst the other prominent speakers were Dr. Bhur, Dr. Ghonasgi, both from the University of Bombay, Dr. S.B. Mujumdar, Principal S.V. Kogekar, Vice Chancellor, Tilak Maharashtra Vidyapeeth, Dr. M.L. Abhyankar, Dean, Faculty of Commerce, University of Poona, and Dr. C.G. Vaidya, Professor-in-charge, Faculty of Commerce and Management Science, University of Poona.

Academic Monitoring Commission for AMU

Mr. Syed Hashim Ali, Vice-Chancellor of Aligarh Muslim University (AMU) has appointed an Academic Monitoring Commission for improving the quality of teaching and research and attaining the academic excellence. The Commission consists of very senior teachers of the University with the Vice-Chancellor as its Chairman. The advice and guidance of this commission will enable the teachers to keep themselves abreast of the latest developments in their area of study and to adopt modern techniques for effective and purposeful teaching.

The monitoring commission will find out whether teaching is proceeding according to the time schedule and whether the course and contents have been covered and will also assess the progress of research and suggest ways and means to ensure high quality research output.

Enhanced Grant for Bihar Varsities

Bihar Government has raised the annual grant to different universities of the State from Rs. 54.55 crores to Rs. 74.90 crores for the current financial year. This has been done on the recommendations of a committee headed by Acharya Devendra Nath Sharma, Chairman of the Bihar Inter-University Board, that was constituted by the Bihar Government to evaluate the financial needs of the universities in the State. The Committee found the sum of Rs. 54.55 crores sanctioned earlier rather inadequate and recommended an increase of Rs. 20.35 crores in view of the extra financial burden on the Universities.

National Youth Festival

The Inter-University National Youth Festival will be held at Annamalai University, Annamalai-nagar (Tamil Nadu) from December 1 to December 5, 1986. About 600 student artists from various universities in the country are expected to participate. The Na-

tional Youth Festival will be inaugurated by Shri S.L. Khurana, Governor of Tamil Nadu on December 1, 1986 and Smt. Margaret Alva, Minister of State for Youth Affairs and Sports, will be the Chief Guest at the valedictory function on December 5.

News from Agril. Varsities

New Research Stations for Pant Varsity

The G.B. Pant University of Agriculture and Technology has decided to set up a new research complex at Rohilkhand with a view to strengthening the research and development of Bareilly, Shahjahanpur and Badaun districts.

The new complex will be set up after the merger of Kachhala and Ujhani research centres of the university.

The Vice-Chancellor, Mr. Kripa Narain said that the decision had been taken to undertake specific research to cater to the relevant needs of 20 districts falling under Kumaon, Garhwal (hill stations),

Meerut, Moradabad and Rohilkhand (plains) divisions.

The Vice-Chancellor said that such a joint campus is also being set up at Kirna in the Pithoragarh district besides a college of hill and tribal home science. The University also plans to set up a research centre at Kedarkanth in Chamoli district. Besides, the Krishi Vigyan Kendras at Dwaranat and Harkidun in Almora and Uttar Kashi districts are also being established.

The Vice-Chancellor stressed the need for a speedy and overall development of hill areas of the state particularly in the field of agriculture, horticulture and animal husbandry with a view to ameliorating socio-economic conditions of the hills' peasantry.

AIU News

AIU Annual Meeting at Ahmedabad

The Sixty-first Annual Meeting of the Association of Indian Universities (AIU) and the National Conference on Distance Education were hosted by the Gujarat University at Ahmedabad. The meeting, attended by 65 Vice-Chancellors and education-

nists from different parts of the country and representatives of the Ministry of External Affairs, Indian Council of Cultural Relations and the NCC Directorate, was inaugurated by Shri R.K. Trivedi, Governor of Gujarat and Chancellor of Gujarat University on Novem-

ber 8, 1986. Dr. A. Christodoulou, Secretary General, Association of Commonwealth Universities, London and Dr. M. Satti of the Association of African Universities, Ghana also graced the occasion.

In view of the importance of Distance Education in the University system, AIU in collaboration with Gujarat University and Indira Gandhi National Open University, organised a two-day National Conference on Distance Education on November 9 and 10, 1986. The Conference was formally inaugurated by Prof. Yash Pal, Chairman, University Grants Commission while Dr. Christodoulou delivered the keynote address. The National Conference provided a unique opportunity for researchers and experts in the field of Distance Education to discuss the issues relating to the development of distance learning system. Thirty eight research papers were presented under seven panels. The Conference addressed itself to the following themes:

- Concept of Distance Education
- Forms of Distance Education
- Course Designing and Preparation
- Role of Media in Distance Education
- Financing of Distance Education
- Student Support Services
- Evaluation Methodology

The recommendations of the conference were presented at the plenary session. Shri Hasmukh Patel, Minister of State for Education, Gujarat Government delivered the valedictory address.

Shri Amar Singh Choudhary, Chief Minister of Gujarat State opened the Exhibition of Books and Teaching Aids organised on the occasion. 28 publishers including Universities, leading publishers, booksellers and Gujarat Granth Nirman Board participated in the Book Exhibition. Most of the visitors impressed upon the necessity of a catalogue of publications of all the universities as also their availability under one roof. The Technical Exhibition displayed various resource materials, audio-visual aids and film scripts. Of particular interest were resource materials produced by EMRC, Gujarat University; computer software packages in areas of examination by Technocrats, Plato and resource materials by DCM; Mini Size computer and packages from Computer Software Linkages, and Computer configurations from Upton.

In the General Session of the Annual Meeting of the Association, Prof. Ramalal Parikh of Gujarat Vidyapith raised several issues relating to the role of **extension** in the higher education system and its importance in the social development of the community with special emphasis on weaker sections of society. The question of making **physical education** and **NCC** as academic subjects in the universities was discussed at length. It was felt that Sports, Physical Education and NCC should be given an important place in the co-curricular activities of educational institutions as envisaged in the New Educational Policy. Introduction of **inter-disciplinary research** and studies in universities was also discussed. **Shri Tarlok Singh**, Secretary, Indian Association of Social Science Institutions, suggested that universities should initiate inter-disciplinary studies for the speedy

development of human resources. The role of rural institutions as instruments of microplanning at grassroot levels for the transformation of rural areas was also discussed. It was felt that there was an urgent need for the consolidation and further strengthening of rural organisations. However, with regard to their funding, it was suggested that a joint session with the Indian Agricultural Universities Association be organised so that norms for adequate provision for the agricultural universities and rural institutions could be worked out. The pattern of assistance provided by the UGC to the State Universities was reviewed and it was recommended that a representative of the State Government should be associated with the UGC's visiting teams to provide better coordination. It was generally accepted that the State Governments should be urged to release at least 20% funds in excess of the last year's allotments to enable the universities to meet rising expenditures. The problems and difficulties in implementation of the National Policy on Education were discussed and it was desired that the AIU should take the initiative to set up a Committee to go into this question and suggest ways and means for speedy implementation of the new Education Policy.

The problem of **foreign students** studying in Indian universities was also considered. The representatives of the Indian Council for Cultural Relations (ICCR) and the Ministry of External Affairs highlighted the difficulties of students in getting admissions and their accommodation in the university hostels. The need for the construction of International Student Hostels was emphasised and better coordination of admission procedures suggested. The report of

the AIU Committee on National Policy on University Libraries was accepted in principle and universities were requested to implement the recommendations with suitable modifications as per local requirements. The erosion of university autonomy was viewed with concern. In this context, the meeting of the AIU delegation with the Prime Minister was appreciated. The urgency to take up follow-up action was however emphasised.

The zonal distribution of universities for the purposes of AIU Membership, Sports Tournaments and Cultural festivals was considered and approved in the Business Session of the Association. The suggestion of **Guru Ghasidas University** in regard to the strengthening of AIU links with regional and statewide problems of universities was appreciated and referred to the Standing Committee for consideration.

Prof. G. Ram Reddy, Vice-Chancellor, **Indira Gandhi National Open University** was elected President of the Association for the year 1987-88. The invitation of **Bharathiar University** to host the 62nd Annual Meeting of the Association at **Coimbatore** was accepted.

New Office Timings

The office of the Association of Indian Universities has switched over to a 40-hour week Monday through Friday effective 19th November, 1986. The new office timings are 9.00 A.M. to 5.30 P.M. with half an hour lunch break from 1.00 to 1.30 P.M. Saturdays and Sundays will be the closed days.

News from Abroad

Oxford University Starves of Funds

Oxford, England's oldest University, is starving for funds. The Government cutbacks have left it unable to fill senior academic posts, allowed library books to deteriorate and can seriously imperil its academic standards. 'The Pockets of excellence are vanishing' said the Oxford Vice-Chancellor, Sir Patrick Neill. Of Oxford's annual budget of \$127 million, more than half comes from the Government. Sir Neill said the University would find itself \$14 million short each year by 1990 because of inadequate funding of higher education. Oxford Playhouse, the university theatre, is likely to be forced to shut next July, and Ashmolean Museum to curtail its hour, Bodleian Library, a treasure house of Western culture, badly needs a modern cataloguing system and improved ventilation to halt decay.

The University has drawn up plans to raise funds from sources other than the Government. The Development Office will use computerised mailings and a professional staff to solicit donations from corporations, foundations and 1,00,000 alumni. A complete list of living Oxford graduates is being compiled. The contributing corporations will be offered access to departmental research alongwith names of promising graduates as prospective job candidates. There is something about the name of Oxford that has a kind of magic: 'if we can't make a success of it, no body can' said Dr. Drucker, University Development Office Director.

Floating Varsity

The world's only 'floating university' aboard a luxury liner the SS Universe carrying the faculty, staff and 340 students left Bombay recently after a three-day stop over in the city.

This University, sponsored by the University of Pittsburgh, Pennsylvania, provides an opportunity for students of any accredited American University to study one semester (approximately 3.5 months) aboard a ship which takes them to about 10 countries. The trip is made twice a year and can cater to around 500 students at a time. According to A.A. Favorini, Academic Dean of the Semester at Sea and a member of the faculty of the University of Pittsburgh, the 'Semester at Sea' is designed to make students more aware of the culture and problems of other countries through personal experience. This programme aims at improving international relations. The course, the ship will take on a semester, is charted out a year in advance and the students are familiarised through lectures with the history, geography, literature, culture and general background of the countries they will visit. The semester is recognised at all universities in the USA and students get the full number of credits they would at another university.

The subjects offered are of a wide variety and all aimed at international relations. These include Sociology, Anthropology, Marine Biology, Music, Dance, Economics, Theatre and Meteorology amongst others. The most popular courses are the business-oriented ones while the least popular are the humanities and fine arts.

This semester the students have taken the course Kobe (Japan), Pusan (S. Korea), Hong Kong and Penang (Malaysia), following which they docked at Bombay. They have now proceeded to Odessa (USSR) for the first time in the history of the university. The final lap of the journey will be Istanbul (Turkey), Dubrovnik (Yugoslavia) and Cadiz (Spain) before reaching Florida (USA), right on time for the Christmas season.

Guaranteed Jobs for New Graduates

Almost 860,000 students graduated from the Soviet Union's 894 institutes and universities this year, with approximately 310,000 of them finishing evening or extra-mural departments.

All of them are guaranteed jobs. Ministries, departments, factories and offices sent requests for new employees to the job placement committees set up at each university well in advance of graduation time. The commissions were manned by members of academic governing bodies and university public organisations, as well as by "customers" representatives. As for the graduates of evening and extra-mural departments who combined studies with day-time working, they are in for promotion.

Although the Constitution guarantees all university graduates jobs in their occupation, according to their skills, there are problems with rational employment of a part of them. Coping with these is an element of a higher and specialised secondary education reform which is well under way in the Soviet Union. The reform envisages that universities and industries will be bound by agreements providing for purpose-oriented and planned personnel training and paving the way for a rational use of university graduates.

AIU Library & Documentation Services

One of the important functions of the Association of Indian Universities is to act as a clearing house of information on higher education in the country. Towards this end the AIU Library is engaged in collection building and developing instruments for the dissemination of research information. Over the years a valuable collection of books and documents on different aspects of higher education has been acquired.

The Library has also developed Bibliography of Doctoral Dissertations as an effective tool in the dissemination of research information. Retrospective bibliographies covering the period 1857-1970 and 1970-75 were the first to appear. Effective 1975, however, the bibliography is issued annually in two volumes. One volume deals with Natural and Applied Sciences while the other records doctoral degrees awarded in Social Sciences and the Humanities. In addition to the normal bibliographical details like the name of the Research Scholar, the title of the thesis, years of registration for and award of the degree, and the name of the University accepting the thesis for award of a doctoral degree, the bibliography also gives name and complete address of the supervising teacher and an availability note that seeks to inform whether a copy of the dissertation is available for consultation and use in the University Library/Department or Registrar's Office.

The columns 'Theses of the Month' and 'Research in Progress' are intended to cut out the time lag between the receipt of information and its inclusion in bibliography. Such Universities as not sending us regular information in respect of Doctoral Theses accepted and research scholars enrolled are welcome to make use of these columns.

The Library is open from 9.00 a.m. to 5.30 p.m. Monday through Friday.

CURRENT DOCUMENTATION IN EDUCATION

A list of select articles culled from periodicals received in AIU Library during October, 1986.

EDUCATIONAL PHILOSOPHY

Ashton, Mark. Educated man as an action man: A reply to Keith Thompson. *British J Ednl Studies* 34 (1), 1986, 4-22.

Barrie, John. Banlock on Newman: A nineteenth-century perspective on contemporary educational theory. *British J Ednl Studies* 34 (1), 1986, 66-78.

Ferguson, John. Values in higher education. *Univ Q* 40 (1), 1986, 63-72.

Thompson, Keith. Discussion paper education, capability and action: Further comment. *British J Ednl Studies* 34 (1), 1986, 23-5.

Tubbs, Nigel. Relationships Vs. systems in education. *Univ Q* 40 (2), 1986, 156-62.

EDUCATIONAL PLANNING

Bhattacharya, Debika. Educational policy for modernization and national development. *J Indian Edn* 12 (3), 1986, 6-14.

Perkin, Harold. Redesigning the university for the 1980s and beyond: An international perspective. *Coll Bd Rev* (134), 1984-85, 10-18.

Satya Sundaram, I. Improving quality of higher education. *Edn Q* 38 (2), 1986, 1-4.

EDUCATIONAL ADMINISTRATION

Alexander, Jeffrey C. The university and morality: A revised approach to university autonomy and its limits. *J Hr Edn* 57 (5), 1986, 463-76.

Becker, William E and Williams Arlington W. Assessing personnel practices in higher education: A case study in the hiring of females. *Eco Edn Rev* 5 (3), 1986, 265-72.

Kemerer, Frank R. The role of deans, department chairs, and faculty in enrolment management. *Coll Bd Rev* (134), 1984-85, 4-8, 28.

Volkwein, J. Fredericks. Campus autonomy and its relationship measures of university quality. *Jr Hr Edn* 57(5), 1986, 510-28.

CURRICULUM

Ediger, Marlow. A curriculum of classics. *New Frontiers Edn* 16 (2) 1986, 1-24.

EDUCATIONAL PSYCHOLOGY

Dunlop, Francis. The education of the emotions and the promotion of autonomy: Are they really compatible? *British J Ednl Studies* 34 (2), 1986, 152-60.

Joshi, H.O. A study of the comparison of sociometric scoring techniques. *Prog Edn* 61 (2), 1986, 43-4.

Sutherland, Margaret B. Education and empathy. *British J. Ednl Studies* 34 (2), 1986, 142-51.

EDUCATIONAL SOCIOLOGY

Jagannathan, V. Equality of educational opportunity. *New Frontiers Edn* 16 (2), 1986, 55-9.

Josh, Shabbir H. Politicization of teachers in India. *Prog Edn* 61 (2), 1986, 33-6.

Fizel, John L and Fiedler, John L. A disaggregated investigation of learning functions in introductory economics. *Eco Edn Rev* 5 (3), 1986, 287-95.

Haldane, John. Religious education in a pluralist society: A philosophical examination. *British J Ednl Studies* 34 (2), 1986, 161-81.

TEACHERS & TEACHING

Bhatt, Bansidhar. Traditional institutions, universities and their coordination. *J Indian Edn* 12 (3), 1986, 35-8.

Shingte, M.B. and Naidu, T.R.V. Teacher's time as a resource for quality improvement in agricultural university education in Maharashtra. *Prog of Edn* 61 (3), 1986, 62-7.

EDUCATIONAL RESEARCH

Corson, David. Educational research and Popper's theory of knowledge. *Univ Q* 40 (1), 1986, 73-89.

Raj, N. Casimir and Raman, A. Research as a tool in the under-graduate teaching-learning process: The experiences of an autonomous college. *Prog Edn* 61 (2), 1986, 29-32, 36, 39.

EDUCATIONAL TECHNOLOGY

Jindal, Asha. Role of computers in education. *Edn Q* 38 (2), 1986, 8-12.

Trachtenberg, Stephen Joel. Even if they survive demographics, can universities survive computers? *Coll Bd Rev* (134), 1984-85, 2-3, 33.

Wofsy, Leon. Biotechnology and the university. *J Hr Edn* 57 (3), 1986, 477-92.

EVALUATION

Kane, Michael T. The role of reliability in criterion-referenced tests. *J Ednl Measurement* 23 (3), 1986, 221-4.

Wood, Robert. Aptitude testing is not an engine for equalising educational opportunity. *British J Ednl Studies* 34 (1), 1986, 26-37.

ECONOMICS OF EDUCATION

Marcus, Richard D. Earnings and the decision to return to school. *Eco Edn Rev* 5 (3), 1986, 309-17.

Mingat, Alain and Tan, Jee-Peng. Expanding education through user charges: What can be achieved in Malawi and other LDCs? *Eco Edn Rev* 5 (3), 1986, 273-86.

PHYSICAL EDUCATION

Paling, David. Project adventure. *Coll Bd Rev* (134), 1984-85, 21-4, 31.

PROFESSIONAL EDUCATION

Chung, P.O. S. Engineering education systems in Japanese Universities. *Comp Edn Rev* 30 (3), 1986, 417-30.

Kinmonth, Earl H. Engineering education and its rewards in the United States and Japan. *Comp Edn Rev* 30 (3), 1986, 396-416.

ADULT EDUCATION

Bakshish Singh. Report on international seminar on distance education—experience of open universities. *Edn Q* 38 (2), 1986, 22-6.

Mathias, Hrydn etc. Continuing education in universities: An innovation perspective. *Studies Adult Edn* 18 (2), 1986, 82-90.

Sahoo, P.K. Distance education: A world-wide perspective. *J Indian Edn* 12 (2), 1986, 46-53.

Sharma, Inder Prabhu. Seventh plan and adult education. *Edn Q* 38 (2), 1986, 16-8.

COMPARATIVE EDUCATION & COUNTRY STUDIES

Obradovic, Josip. Early returning on educational reforms in Yugoslavia. *Comp Edn Rev* 30 (3), 1986, 388-95.

Slee, Peter. Concern for skills. *Univ Q* 40 (2), 1986, 163-70.

THESES OF THE MONTH

A List of Doctoral Theses Accepted by Indian Universities

BIOLOGICAL SCIENCES

Anthropology

1. Duarah, Dwijendra Kumar. *A study on physical anthropology of the monpas of Arunachal Pradesh with special reference to growth of monpa boys.* Gauhati.

Environmental Science

1. Bajwant Singh. *A statistical mechanical approach to ecosystem analysis: The relative abundance pattern of species in a multi-species ecosystem.* JNU.

2. Gummadi, V.R. *Biotechnology: Western strategies and its implications to the developing countries with specific reference to India.* JNU.

Marine Biology

1. Kondalarao, Bandaru. *Qualitative and quantitative survey of meiofauna in the Gautami-Godavari Estuarine system.* Andhra.

Biochemistry

1. Chakrabarti, Krisanu. *Studies on the effects of several insecticides and pesticides in animals in relation to their interaction with a few enzymes and proteins.* Calcutta.

2. Chellammal, S. *Biochemical investigation on dietary fibres.* Kerala.

3. Sawarkar, Vidyadhar P. *Certain biochemical studies on soybean curd production from soybean milk.* Nagpur.

1. Arvind Kumar, K. *Studies on photosynthetic characteristics and nitrogen metabolism as affected by micronutrients in Sorghum. Osmania.*
2. Chauhan, Ram Autar Singh. *Effect of growth retardants and growth promoters on Pisum sativum L. Jiwaji.*
3. Jagtap, Tanaji Gajanan. *Ecological studies in relation to the mangrove environment along the Goa Coast, India. Shivaji.*
4. Jagtap, Vishnu Chimaji. *Study of lichens. Shivaji.*
5. Jain, Alka. *Histochemical and ultrastructural studies in Cyamopsis tetragonoloba (L.) Taub. and Lens culinaris Medic (Leguminosae): Egg to seedling. Delhi.*
6. Jayasankari, N. *Isolation and characterization of mutants in nitrogen fixing blue green algae and their influence on paddy plant, Oryza sativa IR-20. Madurai.*
7. Kale, N.N. *Morphological study in the monocotyledons-V. Marathwada.*
8. Mukherjee, Paromita. *Studies on sheath rot of rice, Oryza sativa L. caused by Sarocladium attenuatum Gams and Hawksw. Avadh.*
9. Panda, Ramesh Chandra. *Cytogenetic study in chili pepper, Capsicum L. Andhra.*
10. Pandya, Soham Akhilechandra. *Studies in sapwood and heartwood. Patel.*
11. Raj Kishor. *Studies on fungal diseases of opium poppy, Papaver somniferum L. in eastern Uttar Pradesh and their control through natural (plant) products. Avadh.*
12. Ramaiah, Prabha Venkata. *Studies in heartwood formation. Patel.*
13. Saluja, Daman. *Regulatory role of phosphorylation in ribulose 1, 5-bisphosphate carboxylase and monophenolase by protein kinases in spinach and wheat. Delhi.*
14. Shukla, Sudhin. *A study of diallel analysis for yield and related characters in opium poppy, Papaver somniferum L. Avadh.*
15. Singh, Thounaojam Bhagirath. *Meiotic prophase analysis by surface spreading of synaptonemal complexes. Manipur.*
16. Surinder Nath. *Biochemical studies in plants infected by viruses and mycoplasma like organisms. Panjab.*
17. Vaishya, Ashok Kumar. *Diel periodicity of phytoplankton, its composition and production. HS Gouri.*
18. Venkateswara Rao, K. *Chemico-genetic analysis of inhibitor gene in anthocyanin biosynthesis and certain in vitro morphogenetic studies in mulze. Osmania.*

Zoology

1. Gayathri Devi, K. *Chromosomal translocations and inherited semisterility in Anopheles stephensi - a malarial vector. Bangalore.*
2. Kohli, Vijay Kumar Gian Chandra. *Taxonomy and zoo-geography of syrphid flies, (Diptera: Syrphidae) of Northern India.*
3. Krishnamurthy, G.P. *Studies on rat bone. Baroda.*
4. Patil, Rajaram Nivrutti. *Studies on mucosubstances in the gall bladder of some vertebrates. Shivaji.*
5. Ray, Manasranjan. *Characterization of anaemia in malignancy. Calcutta.*
6. Roy, Ratna De. *Structure and role of neurosecretory system of some orthopteroid insects. HS Gouri.*
7. Sherief, P.M. *Biochemical investigation on fresh water fishes. Kerala.*
8. Singh, Hari Mohan. *Studies on the bionomics and management of chickpea senilpopper. Avadh.*

9. Singhwi, S.M. *Studies on the bionomics and control of thrips of opium poppy. Vikram.*
10. Tiwari, C.K. *A comparative study of male germ cell cycle in five species of chrysomellids (Coleoptera). Ghisadas.*

Medical Sciences

1. Bandyopadhyay, Jharna. *Effect of malaria and antimalarial drugs on some aspects of red cell metabolism. Calcutta.*
2. Basavarsajiah, M.G. *Study of neurophysiological correlates: Conditioning autonomic functions. Bangalore.*
3. Ghosh, Susanta Kumar. *Morphological variations of Plasmodium vivax and Plasmodium falciparum in the human hosts and in the vectors during posteroadication resurgence of Malaria. Delhi.*
4. Mishra, Alok Kumar. *Fabrication and evaluation of some implants with emphasis on contraceptive hormones and antibiotics. HS Gouri.*
5. Narayan Rao, D. *Study of cerebral electrical activity in brain stimulation: Reward behaviour and its modulations by chemical and electrical stimulation. Bangalore.*
6. Parale, Milind Kumar Purushottam. *Studies on the modulation of some behavioural dysfunctions by alpha adrenoceptor activation in animals. Panjab.*
7. Razdan, Meenakshi. *Studies on enterotoxins produced by Staphylococcus aureus. Delhi.*
8. Sarvaya, Sushil Raghuvirsinh. *Studies on hypertension with special reference to hypotensive effect of Ocimum sanctum. Patel.*

Agriculture

1. Balwinder Kaur. *Microbial degradation of organochlorine pesticides in soil. PAU.*
2. Bhamre, Devidas Nhanu. *Change in genetic diversity of populations of pearl millet, Pennisetum typhoides (Burm.) Stapf and C.E. Hubb. MP Agril.*
3. Dixit, Arun Jagannath Prasad. *Control of Trianthema monogyna L. in maize-berseem sequence. PAU.*
4. Dulcha Singh. *Further studies on the biology and chemical control of Bradysia tritici Cog. (Diptera: Sciaridae) on mushrooms. PAU.*
5. Faguni Ram. *Development of irrigation and its impact on agriculture: A case study of the Sone command area. Magadh.*
6. Jangpo, Birbal. *Studies on detection of non-allelic interactions for yield, physiological and other developmental traits in Pisum sativum L. HP Krishi.*
7. Plaha, Prikshit. *Cytogenetic analysis of D-R genome recombinants and comparative performance of wheat and triticale cytoplasm. HP Krishi.*
8. Purushothama Chari, Appaji. *A study of the managerial ability and entrepreneurial behaviour of farmers. Marathwada.*
9. Suresh Kumar. *Response of Kinnow, Citrus deliciosa plants to potassium nutrition in type hapludalf soil. HP Krishi.*

Veterinary Science

1. Das, Sailendra Kumar. *Antigenic studies on fowl pox virus. PAU.*
2. Roy, Malay Kumar. *Comparative histological and histochemical studies on certain sex related endocrines of normal and vasectomized male goats, Capra hircus. Birs Agri.*
3. Upadhyay, Aditya Narayan. *Biochemical, immunological and therapeutic studies of Gigantocytolysis explantum. Birs Agri.*

COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH

JUNIOR RESEARCH FELLOWSHIP EXAMINATION, NOVEMBER, 1986

It is notified for the information of all concerned that the above examination will be held on 30th November 1986 from 9.30 A.M. onwards at the Centres and Venues indicated below

PLACES OF EXAMINATION AND NAMES AND ADDRESSES OF COORDINATING SUPERVISORS			
Centre	Place	Roll Nos	Name and Address of Coordinating Supervisor
Ahmedabad	Government Polytechnic (OLD SACHIVALAYA) Ahmedabad 380 015	All candidates	Dr. M. M. BHAGWAT, Chemistry Division, Ahmedabad Textile Industry's Research Association (ATIRA), P.O. Polytechnic, Ahmedabad 380 015 (Tel. No. 442671)
Bangalore	Saint Joseph's College 15 Residency Road Bangalore 560 001	All candidates	Sh. M. Ramamurthy, Administrative Officer (Grade I), National Aeronautics Laboratory, Post Bag No. 1779, Bangalore 560 017 (Tel. No. Office: 573151, Res: 577490)
Bhopal	Maulana Azad College of Technology (Regional Engineering College) Bhopal 462 007	All candidates	Dr. R. N. YADAVA, Head, Systems Planning & Research Management, Regional Research Laboratory, Hoshangabad Road, Hoshangabad, Bhopal 462 026 (Tel. No. 64600, 67452, 67347)
Bhubaneswar	(i) College of Agriculture Orissa University of Agriculture & Technology Bhubaneswar 751 003	Roll Nos 00001 to 05000 and 10001 to 13700	Sh. A. K. JOHARI, Asst. Director, Regional Research Laboratory, Bhubaneswar 751 015 (Tel. No. 500336, Administrative Officer)
	(ii) College of Basic Sciences & Humanities Orissa University of Agriculture & Technology Bhubaneswar 751 003	Roll Nos 05001 to 10000	
Calcutta	(i) Jnan Chandra Ghosh Polytechnic 7 Mayurbhanj Road Calcutta 700 023	Roll No 00001 to 01500 and 10001 to 13700	Dr. R. K. Bhowmik, Scientist P & F, PME, Indian Institute of Chemical Biology, 4 Raja S.C. Mukherjee Road, Jadavpur, Calcutta 700 032
	(ii) Directorate of Marine Engineering Training P. 19, Taratolla Road Calcutta 700 088	Roll Nos 03501 to 10000	
Chandigarh	Lala Lajpat Rai Bhawan Madhya Marg Sector 15 B, Chandigarh 160 015	All candidates	Sh. S. K. PLYNE, Principal, Indo-Swiss Training Centre, Central Scientific Instrument Organisation, Sector 10, Chandigarh 160 020 (Tel. No. Office: 26582, Res: 25124)
Dehradun	M. K. P. Postgraduate College, New Road, Dehradun 248 001	All candidates	Dr. B. S. RAWAT, Project Coordinator (Refining Division), Indian Institute of Petroleum, Dehradun 248 005 (Tel. No. 20731, 14, Ext. 247)
Delhi	(i) Gujarati Senior Secondary School, 2, Raj Niwas Marg, Near Inter State Bus Terminus, Delhi 110 054	Roll Nos 05001 to 10000	
	(ii) St. Xavier's School, 4, Raj Niwas Marg, Near Inter State Bus Terminus, Delhi 110 054	Roll Nos 00001 to 03500	
	(iii) Commercial Senior Secondary School, 24, Darya Ganj, Behind Police Station, New Delhi-110 002	Roll Nos 11101 to 13000 and 13501 to 13700	Dr. B. R. MALHOTRA, Scientist, Central Road Research Institute, P.O. CRRRI, New Delhi 110 020

	(iv) Anglo Sanskrit Senior Secondary School, Darya Ganj, Near Subhash Park Crossing, New Delhi-110 002	Roll Nos and 03501 to 05000 and 10001 to 11100 and 13001 to 13500	
Dhanbad	Indian School of Mines (I S M) Dhanbad 826 004	All candidates	Sh R P SINGH, Scientist, Central Mining Research Station, Barwa Road, Dhanbad-826 001 (Bihar) (Tel No Admn Officer 2871) (Director—2616)
Hyderabad	(i) Little Flower Junior College, Opposite Survey of India, Uppal Road Hyderabad-500 007	Roll Nos and 00001 to 05000 and 10000 to 13700	Dr S M NAQVI, Scientist, National Geophysical Research Institute, Uppal Road, Hyderabad-500 007 (Tel No 853130 to 853139/249)
	(ii) Kendriya Vidyalaya (Central School), Uppal Road, Hyderabad 500 007	Roll Nos 05001 to 10000	
Jammu	Regional Research Laboratory Canal Road, Jammu-Tawi 180 001	All candidates	Dr K S M SASTRY, Assistant Director, Regional Research Laboratory, Canal Road, Jammu-Tawi-180 001 (Tel No 44382,33, 7651, 7641)
Jorhat	J B College College Road Jorhat 785 001 (Assam)	All candidates	Dr H D SINGH, Deputy Director, Regional Research Laboratory, Jorhat-785 006 (Assam) (Tel No 20317)
Lucknow	Kalicharan Degree College, Hardoi Road Lucknow-226 003	All candidates	Sh P L CHHABRA, Senior Administrative Officer Central Drug Research Institute, Chatwar Manzil, Post Box No 173, Lucknow-226 001 (Tel No Office 45478, Res 73137)
Madras	College of Engineering Campus, Sardar Patel Road Madras-600 025	All candidates	Sh K MANI, Assistant Director, Structural Engineering Research Centre, CSIR Campus, Taramani, Madras-600 113. (Tel No 412122, 412175)
Nagpur	Shrimati Lakshmi Devi Dhiran Kanya Vidyalaya No 1 Rani Jhansi Square Sitabuldi Nehru Marg Nagpur 440 012	All candidates	Dr R SARIN, Scientist and Head, Basic Research and Training Division, National Environmental Engineering Research Institute Nehru Marg, Nagpur-440 020 (Tel No Office 25640, 26071, Res 22254 PP)
Pilani	C E R I Bal Mandir C E R I Colony Pilani 333 031 (Rajasthan)	All candidates	Sh R R SAMNOL, Scientist and Head IITG Central Electronics Engineering Research Institute, PILANI 333 031 Rajasthan (Tel. No 142)
Pune	(i) Loyal High School (Adjacent to National Chemical Laboratory Guest House) Pashan Road Pune-411 009	Roll Nos 03501 to 13700	
	(ii) St. Joseph's Convent High School (Adjacent to National Chemical Laboratory Guest House), Pashan Road Pune-411 008	Roll Nos 00001 to 03500	Dr S H IQBAL, Head, Division of Technical Services National Chemical Laboratory, Pune-411 008 (Tel No Office 57860 Res 52799)
Trivandrum	University College, M G Road Trivandrum (Kerala)	All candidates	Dr G D SURENDER, Head, Process Engineering Division, Regional Research Laboratory, Industrial Estate P O Trivandrum-695 019 (Tel No 76774)

Admit Cards to all the candidates have already been despatched. If any candidate has not received the Admit Card he should contact the Co-ordinating Supervisor concerned and take the examination at the Centre indicated in his/her application. Such candidates should carry two passport size photographs to the Examination Hall. They will be admitted to the examination by the Co-ordinating Supervisor concerned provisionally and allowed to appear at their own risk.

SUKHADIA UNIVERSITY

UDAIPUR

Corrigendum to Advertisement No. 10/86

Dated: 27-10-1986.

Please read following correction in the above Advertisement:

1. Postal Stamp of Rs. 1.50 only instead of Rs. 150 only in the First paragraph of the Advertisement.
2. Associate Professor Commerce (Business Management) — No. of Post Two instead of ONE.
3. Assistant Professor Commerce (Business Management) — No. of Post TWO instead of ONE.

G.S. Sharma
REGISTRAR

UNIVERSITY OF JAMMU

NOTICE

Applications on the prescribed forms are invited for the following posts so as to reach the undersigned on or before 15 January 1987.

1. Professors (Rs. 1500-2500), one each in Laws, Political Science (Modern Political Theory) temporary lien bound vacancy, Geology (Sedimentology) (Temporary lien bound vacancy) and Physics (High Energy Physics).
2. Reader (Rs. 1200-1900), Political Science (Two posts) (1) Research Methods in Social Sciences, Modern Political Analysis and Political Processes in India (2) International Politics/public administration (especially organizational behaviour), Mathematics (one post), Buddhist Studies (One post) Library Science (one post).
3. Coordinator in Laws for the Institute of Correspondence Education (Rs. 1200-1900) one post.
4. Project Engineer Electronics (Rs. 1100-1600).
5. Lecturers (Rs. 700-1600), Physics (one post), Buddhist Studies (two posts) and Commerce for the Institute of Correspondence Education (two posts).

Prescribed application forms and other details can be had from Shri Vachaspati Sharma, Asstt. Registrar (Forms & Stationery) by sending a self addressed envelope (25 cms X 10 cms) bearing postage stamps worth Rs. 4/- alongwith crossed postal order worth Rs. 20/- drawn in favour of the Registrar, University of Jammu, Canal Road, Jammu, Jammu (Tawi)—180001. Cashable at Jammu Post Office.

K.K. Gupta
REGISTRAR

INDIAN INSTITUTE OF SCIENCE

BANGALORE-560012.



Requires

SCIENTIFIC OFFICERS in the Instrumentation and Services Unit at the Institute.

POST I Essential : M.E./M. Tech. with at least one year experience in the areas of Instrumentation Electronics or Optics OR M. Sc. degree and a publication record comparable to the work required for a Ph.D. degree with at least three years experience in the above areas.

Desirable : (1) Experience in teaching laboratory courses.

(2) Experience in Computer Programming.

POST II Essential : M.E./M. Tech. with at least one year experience in analytical instrumentation such as X-ray instrumentation OR M. Sc. degree and a publication record comparable to the work required for a Ph.D. degree with at least three years experience in the above areas.

Desirable : (1) Practical knowledge of design and operation of sophisticated crystallographic equipment such as single crystal diffractometers. (2) Experience in teaching laboratory courses. (3) Experience in Computer Programming.

The post at (Post No. 1) reserved for Scheduled Caste was advertised in January 1985. Since no SC-ST candidate applied for the post, the post is now deserved and re-advertised inviting applications from general candidates also.

EMOLUMENTS: Rs. 2123.95 p.m. in the scale Rs. 700-1300.

NOTE : Candidates with doctorate degree and having a good academic record and publications may be considered for the position of Lecturer in the scale Rs. 700-1600.

Details and prescribed application forms can be obtained on request accompanied by an IPO for Rs. 5/- (free of cost to SC/ST candidate on production of Caste certificate from a Competent Authority) drawn in favour of Registrar, Indian Institute of Science, Bangalore-12 along with a self-addressed Rs. 3.30 stamped envelope of size 28x18 cms. on or before 1st December 1986.

ADVT. No. R (IA)308-53/86

REGISTRAR

KUMAUN UNIVERSITY, NAINITAL

Advertisement No. 1/335

Dated 12-11-86

Applications for the following posts are invited by 25 December, 1986 on prescribed form obtainable from the Office of the Registrar, Kumaun University, Nainital-263 001 (U.P.) by sending a self addressed 9 x 6 envelope and crossed postal order/Bank draft for Rs 5/- payable to the Finance Officer, Kumaun University, Nainital. Money orders are not acceptable.

Name of the Post	No. of Post	Scale of Pay	Specialization
Lecturer Economics	1 TLR	700-1600	—
Lecturer Music	1 R	700-1600	Tabla

Note: R implies regular TLR implies temporary likely to be regular

Qualifications by post after 20th December, 1986. Application on plain papers and received after due date are not acceptable.

1 For the Post of Lecturer Economics

(a) a doctorate degree or research work of an equally high standard in a relevant subject and

(b) consistently good academic record with first or high second class Master's degree or an equivalent degree of a foreign University in a relevant subject.

R.C. Pant
REGISTRAR

BANARAS HINDU UNIVERSITY

(Advertisement No. 7 1986/87)

APPLICATIONS are invited for the undermentioned posts. The benefit of Provident Fund Pension, Dearness Allowance, House Rent Allowance and City Compensatory Allowances are admissible according to University rules. The retirement age of the University Employees is 60 years. The appointment will be made on one year probation on all permanent posts. Higher starting salary within the grade is admissible to specially qualified and experienced candidates.

Applications will be entertained on the prescribed form duly supported with a Bank Draft or Crossed Indian Postal Order of Rs 10/- (of Rs 250 for the candidates belonging to Scheduled Caste/Scheduled Tribes category) in favour of the Registrar, BHU towards application fee. Application form along with detailed qualifications will be supplied on receipt of Crossed I.P.O. Bank Draft of Rs. 25/- in favour of the Registrar, B.H.U. and self-addressed envelope of 23 cm x 10 cm size carrying stamps of Rs 150. Candidates called for interview for these posts will be paid actual Railway fare by the Second Class plus reservation charges for sleeper, if paid and/or actual Bus fare from the present residence bothways by the shortest route as per university rules. No other expenses will be paid.

Applications for each post be sent separately along with attested copies of certificates and marksheets in support of the qualifications and experience mentioned in the application and be addressed to the Registrar (Selection Committee Section), Banaras Hindu University, Varanasi-221005 INDIA.

Incomplete application in any respect will not be entertained for consideration. Those who are in service should apply through proper channel. Money Order or Cheque will not be accepted towards application fee.

Reservation: (1) A reservation of 15% in the case of Scheduled Castes and 74% in the case of Scheduled Tribes will be made in the category of teaching posts upto the level of Lecturers only. (2) A reservation of 22.4% (15% SC and 7.4% ST) will be made in the category of non-teaching posts at entry level.

The last date for receipt of application in the Office of the Registrar (Selection Committee Section), Banaras Hindu University either by post or by hand will be January 10, 1987. Applications will be received by hand at the Counter only upto 2.30 P.M. on each working day till the last date. No application shall be entertained after the last date from external, in-service employees and the candidates residing abroad.

Note. 1 Number of vacancies are tentative and can vary according to needs.

2 Panel may be drawn for temporary appointment of lecturers against future vacancies.

Grade

Professor: Rs 1500-60-1800-100-2000-125 2-2500 (N.P.A. Rs 600/- p.m. to Medical Graduates appointed in the Institute of Medical Sciences only).

Reader: Rs 1200-50-1300-60-1900 (N.P.A. — 50% of pay subject to maximum of Rs 500/- p.m. to Medical Graduates appointed in the Instt. of Medical Sciences only).

Lecturer: Rs 700-40-1100-50-1600 (N.P.A. 50% of pay subject to maximum of Rs 500/- p.m. to Medical Graduates appointed in the Instt. of Medical Sciences only).

Other Posts: As indicated against the posts.

OR

A traditional or professional artist with highly commendable professional achievement in the subject concerned.

Further details regarding qualifications, service terms and permissible relaxations in qualifications will be provided with application form. Preference will be given to SC/ST candidates if otherwise considered suitable by the Selection Committee. Application form will not be sent

Faculty of Science

- 1 Professor of Computer Science (One)
- 2 Professor of Zoology (Spl in Reproductive Physiology) — Under Special Assistance Programme — Dept of Zoology (One)
- 3 Professor of Chemistry (Inorganic/Analytical) (One)
- 4 Professor of Physics (One)
- 5 Professor of Physics (Theoretical Physics) — Under Special Assistance Programme — Dept of Physics (One)
- 6 Lecturer in Geography (One)

Faculty of Arts

- 7 Professor of Library Science (One)
- 8 Professor of History of Arts (One)
- 9 Reader in Philosophy (One) (Mahula Mahavidyalaya)
- 10 Reader in Telugu (One)
- 11 Lecturer in English (One)

Note Those who have applied timely for the post of Lecturer in English in response to Advt No 3/1984-85 need not apply again

Faculty of Social Sciences

- 12 Professor of Political Science (One)
- 13 Reader in Sociology (One)
- 14 Lecturer in Sociology (One)

Faculty of Visual Arts

- 15 Professor of Sculpture (Dept of Plastic Arts) (One)

Institute of Technology

- 16 Professor of Ceramic Engineering (One)
- 17 Professor of Ceramic Engineering (Glass Technology) (One)
- 18 Professor of Computer Engineering (One)
- 19 Lecturer in English (One)

Note Those who have applied timely for the post of Lecturer in English in response to Advt No 11/1984-85 need not apply again

Institute of Medical Sciences

- 20 Professor of Pathology (One)
- 21 Reader in Surgery (Urology) (One)
- 22 Lecturer in Medicine (Endocrinology) (One)
- 23 Medical Officer (Urban Health Centre) (Dept of P S M) (One)

Grade Rs 700-1600

24 Medical Officer (Male) (One) — Under Post Partum Programme — Dept of Obst and Gynaecology

Grade - Rs 700-1600

Note Those who have applied timely for the post of Medical Officer (Male) in response to Advt No 5/1985-86 need not apply again.

25 Research Officer (Neurophysiology Unit) (Dept of Physiology) (One)

Grade Rs 700-1600

**MALAVIYA REGIONAL
ENGINEERING COLLEGE
JAIPUR-302017**

Advertisement

Applications are invited on prescribed application forms by 15-12-1986 for the

following post of Lecturers in the UGC Pay Scales (P Permanent, T Temporary) Civil Engg (5P, 1T), Structural Engg (2T) Mechanical Engg (2P) Electrical Engg (3T), Electronics (3T) The No of posts are indicative only and subject to change

Full particulars and application forms may be obtained by sending Rs 2.50 (cost of application form and postage) in the form of crossed IPO (M O will not be accepted) in favour of the undersigned payable at the post office at this College alongwith a self addressed unstamped envelope of the size 24 cm x 10 cm. The application forms can also be obtained from the Accounts Section of the College on cash payment of Re 1 only

REGISTRAR

CENTRAL INSTITUTE OF ENGLISH AND FOREIGN LANGUAGES

HYDERABAD 500 007

Advertisement No XII 86

Applications on prescribed form are invited for the following posts in the Institute service so as to reach the undersigned on or before 10.12.1986

Sl No	Name of the post with scale of pay	Department/Unit	No of posts
1	Professor/Senior Fellow (Rs 1500-2500)	English Literature	One
2	-do-	Radio TV & Cinematography	One
3	Reader/Fellow (Rs 1200-1900)	Methods	One
4	-do-	Extension Services	One

Prescribed application forms and further details regarding qualifications etc can be had from the Registrar, Central Institute of English and Foreign Languages Hyderabad - 500 007 by sending a postal order for Rs 2 (Rs 50 for SC ST candidates) with a self addressed envelope (10 x 20 cm) duly stamped (Re 1 30 Ps)

K Javashankar
REGISTRAR